

## عنوان مقاله:

Quantitative Determination of Apigenin, Catalpol, and Gallic Acid in Total Extracts From Different Parts of Plantago Species by High-Performance Liquid Chromatography

## محل انتشار:

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## خلاصه مقاله:

Background: Plantago species have been used in traditional medicine to treat many types of diseases. The detection of apigenin, catalpol, and gallic acid in Plantago lanceolata and Plantago major has been optimized using this protocol. Methods: The analyses were optimized using the C<sub>18</sub> column, acetonitrile, and orthophosphoric acid–water (1:1%) as mobile phase at a flow rate of 1 mL.min<sup>-1</sup>, and a wavelength detector was observed at λ 204 nm. Results: The limits of detection (LOD) and quantification (LOQ) of the method were “0.04 and 0.14 µg/ mL”, “0.007 and 0.022 µg/mL”, as well as “0.02 and 0.073 µg/mL” for catalpol, apigenin, and gallic acid, respectively. The highest level of apigenin in the dry weight of plants (4.34, and 1.99 µg/mg) was obtained from the spike and aerial parts of P. lanceolata and P. major species. High levels of gallic acid extracted from aerial parts and leaves of both species were 12.85 and 10.11 µg/mg, respectively. The highest amount of catalpol (43.33 and 18.15 µg/mg DW) was obtained from the spike of both Plantago sp. The calibration curves were linear with a correlation coefficient ( $r > 0.9991$ ,  $0.9996$ , and  $0.9978$ ). Conclusion: In sum, the most simple and sensitive method to measure compounds was developed using HPLC, which showed a great validity.

## کلمات کلیدی:

Flavonoid, Iridoid glycoside, LOD, LOQ, Phenol

## لینک ثابت مقاله در پایگاه سیویلیکا:

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